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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/539,903	06/16/2005	Klaus Schoeller	DE020319	6540
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EXAMINER				
WALFORD, NATALIE K				
ART UNIT		PAPER NUMBER		
2879				
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/539,903

Applicant(s)

SCHOELLER ET AL.

Examiner

NATALIE K. WALFORD

Art Unit

2879

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Response to Amendment

The Remarks, filed on February 18, 2008, has been entered and acknowledged by the Examiner. Claims 1-25 are pending in the instant application.

Drawings

The drawings are objected to under 37 CFR 1.83(a) because they fail to show the interference filter and light-absorbing means as described in the specification. Any structural detail that is essential for a proper understanding of the disclosed invention should be shown in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boonekamp et al. (WO 01/24224) in view of Dierks et al. (US 5,608,227).

Regarding claim 1, Boonekamp discloses a high-pressure discharge lamp (item 14) in figure 1B comprising a burner (item 12) having a discharge space, two electrodes (page 7, lines 27-31) extending in the discharge space, a gas filling in the discharge space that contains at least an inert gas and a metal halide mixture (page 7, lines 27-31), and an outer bulb (item 11) having two ends, the burner being attached, at least at one end, to the outer bulb, wherein the outer bulb comprises at least one light-absorbing means (item 16) and at least one interference filter (item 15), but does not expressly disclose that an interference filter is arranged in at least a part of the burner, as claimed by Applicant. Dierks is cited to show a high-pressure discharge lamp in figure 2 with a burner (item 2) that has an interference filter (item 1a) that is arranged in a part of the burner. Dierks teaches that the filter absorbs certain wavelengths and allows other to transmit (column 7, lines 23-36).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Boonekamp's invention to include an interference filter is arranged in at least a part of the burner as suggested by Dierks for absorbing certain wavelengths.

Regarding claim 2, the combined reference of Boonekamp and Dierks disclose the high-pressure discharge lamp as claimed in claim 1, wherein the interference filter is arranged on an outer surface of the burner (Dierks; item 1a).

Regarding claim 3, the combined reference of Boonekamp and Dierks disclose the high-pressure discharge lamp as claimed in claim 1, the light-absorbing means is provided on an inner surface of the outer bulb (Boonekamp; FIG. 1B, end of item 16 dotted line), and between an outer surface of the outer bulb and the at least one interference filter (Boonekamp; FIG. 1B).

Regarding claim 4, the combined reference of Boonekamp and Dierks disclose the high-pressure discharge lamp as claimed in claim 1, wherein at least at surfaces of areas that are used to attach the burner to the outer bulb, no light-absorbing means and/or interference filters are arranged (Boonekamp; FIG. 1B, area at top and bottom of item 13).

Regarding claim 5 the combined reference of Boonekamp and Dierks disclose a high-pressure discharge lamp as claimed in claim 1, but does not expressly disclose that in that the light transmittance of the interference filter and of the at least one interference filter, with regard to the wavelength range of 600 to 800 nm, is >90% for both, as claimed by Applicant. Boonekamp does disclose that though that the lamp transmits in the wavelength range between 570 and 620 nm (page 6, lines 9-16). Therefore, it would be understood to one with ordinary skill in the art that the lamp would transmit light greater than 90%, since Boonekamp's lamp transmits in the same wavelength range as Applicant's.

Regarding claim 6, the combined reference of Boonekamp and Dierks disclose a high-pressure discharge lamp as claimed in claim 1, but does not expressly disclose that in that the light transmittance of the light-absorbing means with regard to the wavelength range of 600 to

800 nm ranges between 70 and substantially 100%, as claimed by Applicant. Boonekamp does disclose that though that the lamp transmits in the wavelength range between 570 and 620 nm (page 6, lines 9-16). Therefore, it would be understood to one with ordinary skill in the art that the lamp would transmit light between 70 and 100%, since Boonekamp's lamp transmits in the same wavelength range as Applicant's.

Regarding claim 7, the combined reference of Boonekamp and Dierks disclose a high-pressure discharge lamp as claimed in claim 1, but does not expressly disclose that in that a thickness of at least one of the interference filter and the at least one interference filter ranges between 800 and 2800 nm, as claimed by Applicant. Dierks does disclose though that the layer can be between 30 and 50 nm (column 4, line 43). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a thickness of at least one of the interference filter and the at least one interference filter ranges between 800 and 2800 nm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 8, the combined reference of Boonekamp and Dierks disclose the high-pressure discharge lamp as claimed in claim 1, wherein at least one of the interference filter and at least one interference filter is composed of a plurality of layers, including a first layer having a higher refractive index that alternates with a second layer having a lower refractive index, the second layer having the lower refractive index including SiO₂ and the first layer being composed of a material having a refractive index higher than SiO₂ (Boonekamp; page 7, lines 5-15).

Regarding claim 9, the combined reference of Boonekamp and Dierks disclose the high-pressure discharge lamp as claimed in claim 8, wherein the first layer is composed of a material

selected from a group consisting of titanium oxide, tantalum oxide, niobium oxide, hafnium oxide, silicon nitride, very preferably zirconium oxide ZrO_2 , or a mixture of said materials (Boonekamp; page 10, lines 1-7).

Regarding claim 10, the combined reference of Boonekamp and Dierks disclose the high-pressure discharge lamp as claimed in claim 1, wherein a thickness of the light-absorbing means ranges between 5 nm and 10,000 nm (Boonekamp; page 9, lines 18-25).

Regarding claim 11, the combined reference of Boonekamp and Dierks disclose a high-pressure discharge lamp as claimed in claim 1, characterized in that the light-absorbing means contains inorganic pigments, which absorb part of the visible light (Boonekamp; page 6, lines 9-16 and 26-33), but does not expressly disclose that the average diameter of the inorganic pigments is below 100 nm, as claimed by Applicant. Boonekamp does disclose that that light absorbing means layer is between 50 and 1000 nm thick. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the average diameter of the inorganic pigments below 100 nm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 12, the combined reference of Boonekamp and Dierks disclose a high-pressure discharge lamp as claimed in claim 11, characterized in that the inorganic pigment is composed of a material or an oxide selected from a group consisting of iron oxide, zinc-iron-oxide ($Zn-Fe_2O_4$ or $ZnO-Zn-Fe_2O_4$), phosphor-doped iron oxide, zinc-iron-chromium, bismuth-vanadate, in particular pucherite bismuth-vanadate, vanadium oxide, zirconium-praseodymium-

silicate, titanium-antimony-chromium, nickel-antimony-titanium and silver, or the mixtures thereof (Boonekamp; page 6, lines 26-33).

Regarding claim 13, the combined reference of Boonekamp and Dierks disclose a light system for motorcars comprising at least the high-pressure discharge lamp as claimed in claim 1 (Boonekamp; page 9, lines 18-25).

Regarding claim 14, the combined reference of Boonekamp and Dierks disclose the high-pressure discharge lamp as claimed in claim 11, wherein the inorganic pigment includes at least one of pucherite bismuth-vanadate, vanadium oxide, zirconium-praseodymium-silicate, titanium-antimony-chromium, nickel-antimony-titanium, silver, and mixtures thereof (Boonekamp; page 6, lines 26-33).

Regarding claim 15, Boonekamp discloses a discharge lamp (item 14) in figure 1B comprising: a burner (item 12) having a discharge space; electrodes (page 7, lines 27-31) extending in the discharge space; a gas (page 7, lines 27-31) filling in the discharge space; an outer bulb (item 11) surrounding the burner; a light-absorbing coating (item 16) located on the outer bulb; a first interference filter (item 15) located on the light-absorbing coating, but does not expressly disclose a second interference filter located in at least a part of the burner, as claimed by Applicant. Dierks is cited to show a high-pressure discharge lamp in figure 2 with a burner (item 2) that has an interference filter (item 1b) that is arranged in a part of the burner. Dierks teaches that the filter absorbs certain wavelengths and allows other to transmit (column 7, lines 23-36).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Boonekamp's invention to include an interference filter is

arranged in at least a part of the burner as suggested by Dierks for absorbing certain wavelengths.

Regarding claim 16, the combined reference of Boonekamp and Dierks disclose the discharge lamp of claim 15, further comprising a further light-absorbing coating located on an inside surface of the outer bulb (Boonekamp; FIG. 1B, end of item 16 dotted line), wherein the light-absorbing coating is located on an outside surface of the outer bulb (Boonekamp; FIG. 1B).

Regarding claim 17, the combined reference of Boonekamp and Dierks disclose the discharge lamp of claim 15, wherein surfaces that are used to attach the burner to the outer bulb are devoid of at least one of the light-absorbing coating, the first interference filter, and the second interference filter (Boonekamp; see FIG. 1B).

Regarding claim 18, the combined reference of Boonekamp and Dierks disclose the discharge lamp of claim 15, but does not expressly disclose that light transmittance of at least one of the first interference filter and the second interference filter in a wavelength range of 600 to 800 nm, is greater than 90%, as claimed by Applicant. Boonekamp does disclose that though that the lamp transmits in the wavelength range between 570 and 620 nm (page 6, lines 9-16). Therefore, it would be understood to one with ordinary skill in the art that the lamp would transmit light greater than 90%, since Boonekamp's lamp transmits in the same wavelength range as Applicant's.

Regarding claim 19, the combined reference of Boonekamp and Dierks disclose the high-pressure discharge lamp of claim 15, but does not expressly disclose light transmittance of the light-absorbing coating with regard to a wavelength range of 600 to 800 nm ranges between 70 and substantially 100%, as claimed by Applicant. Boonekamp does disclose that though that the

lamp transmits in the wavelength range between 570 and 620 nm (page 6, lines 9-16).

Therefore, it would be understood to one with ordinary skill in the art that the lamp would transmit light between 70 and 100%, since Boonekamp's lamp transmits in the same wavelength range as Applicant's.

Regarding claim 20, the combined reference of Boonekamp and Dierks disclose the discharge lamp of claim 15, but does not expressly disclose a thickness of at least one of the first interference filter and the second interference filter ranges between 800 and 2800 nm, as claimed by Applicant. Dierks does disclose though that the layer can be between 30 and 50 nm (column 4, line 43). It would have been obvious to one having ordinary skill in the art at the time the invention was made to have a thickness of at least one of the interference filter and the at least one interference filter ranges between 800 and 2800 nm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Regarding claim 21, the combined reference of Boonekamp and Dierks disclose the discharge lamp of claim 15, wherein at least one of the first interference filter and the second interference filter includes a plurality of alternating first layer and second layer, wherein a first refractive index of the first layer is higher than a second refractive index of the second layer (Boonekamp; page 7, lines 5-15).

Regarding claim 22, the combined reference of Boonekamp and Dierks disclose the discharge lamp of claim 21, wherein the second layer includes SiO_2 and the first layer includes at least one of titanium oxide, tantalum oxide, niobium oxide, hafnium oxide, silicon nitride, zirconium oxide ZrO_2 , and a mixture thereof (Boonekamp; page 10, lines 1-7).

Regarding claim 23, the combined reference of Boonekamp and Dierks disclose the discharge lamp of claim 15, wherein a thickness of the light-absorbing coating ranges between 5 nm and 10,000 nm (Boonekamp; page 9, lines 18-25).

Regarding claim 24, the combined reference of Boonekamp and Dierks the discharge lamp of claim 15, but does not expressly disclose that the light- absorbing coating includes inorganic pigments which absorb a portion of visible light and have an average diameter below 100 nm, as claimed by Applicant. Boonekamp does disclose that that light-absorbing means layer is between 50 and 1000 nm thick. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the average diameter of the inorganic pigments below 100 nm, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art.

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Boonekamp et al. (WO 01/24224) in view of Fischer et al. (US 5,109,181).

Regarding claim 25, Boonekamp discloses a discharge lamp (item 14) in figure 1B comprising: a burner (item 12) having a discharge space; electrodes (page 7, lines 27-31) extending in the discharge space; a gas filling in the discharge space (page 7, lines 27-31); an outer bulb (item 11) surrounding the burner; a first light-absorbing coating (item 16) located on an outer surface of the outer bulb; an interference filter (item 15) located on the first light-absorbing coating, but does not expressly disclose that a second light-absorbing coating located on an inner surface of the outer bulb, as claimed by Applicant. Fishcer is cited to show a

discharge lamp in figure 2 with an outer bulb (item 15) that has a light-absorbing coating (item 16) on the inner surface. Fischer teaches that the light-absorbing coating blocks certain radiation (column 3, lines 39-40).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Boonekamp's invention to include an interference filter is arranged in at least a part of the burner as suggested by Fischer blocking certain radiation.

Response to Arguments

Applicant's arguments filed February 18, 2008 have been fully considered but they are not persuasive. The Examiner respectfully disagrees with Applicant's arguments. The Examiner notes that the limitation reciting 'an interference filter is arranged in at least a part of the burner' does not preclude having the film on outside surface of the burner. Furthermore as described in Applicant's specification, the interference filter is formed on an outside of the burner, which is also disclosed by Dierks. The interference filter is being referred to as item 1a. Furthermore, multiple layers having alternating refractive indices is clearly disclosed in Boonekamp, page 7, lines 5-15, as previously stated. Regarding the limitation reciting 'light-absorbing coating located on an inner surface of the outer bulb' in claim 25 the Examiner submits that the filter 16 coated on an inner surface of the outer bulb of Fischer does absorb blue radiation emitted by the lamp and hence can be considered as light-absorbing film. Hence, Applicant's limitations are met as set forth.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Natalie K. Walford whose telephone number is (571)-272-6012. The examiner can normally be reached on Monday-Friday, 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel can be reached on (571)-272-2457. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nkw
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